No. 9100172

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

The Ohio State University,
Ohio Agricultural Research and Development Center

WHEREAS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT TY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Chapman'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D.C. *this* 31st *day of* January *in the year of our Lord one thousand nine hundred and* ninety-four.

Attest:

Kenneth R. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

FORM APPROVED: OMB 0581-0055, Expires 1 31 91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Ohio Agricultural Research and Development Center, The Ohio State University

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
HM8625

3. VARIETY NAME
Chapman

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
~~1680 Madison Avenue~~ 2021 Coffey Rd,
~~Wooster, Ohio 44691~~ Columbus, OH 43210-1086
JHH 29 Dec. 1992

5. PHONE *(Include area code)*
~~(216) 263-3701~~
614-292-2001
JHH 29 Dec. 1992

FOR OFFICIAL USE ONLY

PVPO NUMBER
9100172

FILING
Date: May 6, 1991
Time: ☐ A.M. ☐ P.M.

FEES RECEIVED
Filing and Examination Fee: $2150.-
Date: May 6, 1991
Certificate Fee: $ 250.00
Date: Jan. 10, 1994

6. GENUS AND SPECIES NAME
Glycine max

7. FAMILY NAME *(Botanical)*
Fabaceae (Leguminosae)

8. CROP KIND NAME *(Common Name)*
Soybean

9. DATE OF DETERMINATION
December 15, 1986

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
State Agricultural Experimental Station

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
~~Dr. B. A. McBlain~~ Dr. Steven St. Martin
Dept. of Agronomy, OSU-OARDC
~~1680 Madison Avenue~~ 2021 Coffey Rd.
~~Wooster, OH 44691~~ Columbus, OH 43210-1086
JHH 29 Dec. 1992
PHONE *(Include area code)*: ~~(216) 263-3879~~ 614-292-8499

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

a. [X] Exhibit A, Origin and Breeding History of the Variety.
b. [X] Exhibit B, Novelty Statement.
c. [X] Exhibit C, Objective Description of Variety.
d. [ ] Exhibit D, Additional Description of Variety.
e. [X] Exhibit E, Statement of the Basis of Applicant's Ownership.
f. [X] Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____
g. [X] Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
[X] YES *(If "YES," answer items 16 and 17 below)* [ ] NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
[X] YES [ ] NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[X] FOUNDATION [X] REGISTERED [X] CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
[ ] YES *(If "YES," through* [ ] Plant Variety Protection Act [ ] Patent Act. Give date: _____)
[X] NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
[ ] YES (If "YES," give names of countries and dates)
[X] NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
[signature]	Plant Breeder	8/24/90
SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
[signature]	Patent & Copyright Librarian	5/2/91

FORM CSSD-470 (5-89) Edition of FORM LS-470, 3-86, is obsolete

'Chapman' Exhibit A - Origin and Breeding History

'Chapman', previously tested as the advanced line HM8625 and as the breeding line OX81156-3-12, was originated as a BC_2F_4 line from A79-236002[3] x HW79149. [A79-236002 is an Iowa breeding line from the cross Pride 'B216' x 'Cumberland'. HW79149 is an Ohio backcrossed breeding line derived from the Iowa breeding line A72-507 (Amsoy x Wayne), and which has *Rps* 1-c and another (uncharacterized) gene for resistance to *Phytophthora megasperma* f. sp. *sojae* (*Pms*). Access to the Iowa breeding lines was acquired by virtue of their entry into the Uniform Soybean Tests, Northern States or direct exchange.] The original cross (OX81156) was made in the summer of 1981 at OSU-OARDC, Wooster, Ohio. The BC_1 was made in the greenhouse during the winter of 1981-82. The BC_2 was made in the summer of 1982. Three BC_2F_1 and BC_2F_2 families were grown in a winter nursery in Puerto Rico. Chapman was selected originally as a BC_2F_3 plant (one of 14 plants selected from one of the three BC_2 families: OX81156-3-12), was redesignated as HM8625 when it entered the Ohio Advanced Line Test as entry 25 in 1986, and was reselected as a composite from the progeny of 25 BC_2F_6 plants which appeared to be identical in two successive generations. The seed was increased in 1989 and made available to foundation seed organizations in states participating in the regional tests. It was named after Jonathon "Johnny Appleseed" Chapman.

Chapman was evaluated for four years in multiple location bordered tests in Ohio prior to release. It was also tested in the Uniform Soybean Tests, Northen States (USTNS) from 1987 to 1989 inclusive. Data from the Ohio and USTNS tests indicated that Chapman was superior to the later maturing 'Burlison' and comparable to the earlier maturing 'Kenwood', but was more resistant to *Pms* than Kenwood.

Chapman has purple flowers, grey pubescence, brown pods,and shiny yellow seed with imperfect black hila. It is a late Group II cultivar, and is generally adapted from 40 to 42° N. Lat. It is known to be resistant to races 1, 3, 4 and 16 and susceptible to at least races 7 and 10 of *Pms* . The original source of the resistance is PI 82263-2. It is also moderately resistant to purple seed stain (caused by *Cercospora kikuchii*) and pod and stem blight (caused by *Diaporthe phaseolorum*).

Chapman is a pure line variety which has been stable in its performance and characteristics in all tests. It has been stable in all years and locations. It can have up to 2% variants for flower and/or pod and/or pod and/or pubescence color.

'Chapman' Exhibit B - Statement of Novelty

'Chapman' has phytophthora resistance derived from PI 82263-2. Chapman is most similar to 'Century 84'. Compared to Century 84, which is very similar in plant type, maturity and *Phytophthora megasperma* f. sp. *sojae* (*Pms*) resistance, Chapman has gray pubescence and imperfect black hila whereas Century 84 has tawny pubescence and black hila. Chapman was significantly higher yielding than Century 84 in five years of testing in Ohio.

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Ohio Agricultural Research and Development Center, The Ohio State University	HM8625	Chapman

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
1680 Madison Ave.
Wooster, OH 44691

FOR OFFICIAL USE ONLY
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Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]

1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ **2. SEED COAT COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[2] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ **4. SEED SIZE: (Mature Seed)**

[1][9] Grams per 100 seeds

★ **5. HILUM COLOR: (Mature Seed)**

[5] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

★ **6. COTYLEDON COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green

★ **7. SEED PROTEIN PEROXIDASE ACTIVITY:**

[1] 1 = Low 2 = High

★ **8. SEED PROTEIN ELECTROPHORETIC BAND:**

[0] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ **9. HYPOCOTYL COLOR:**

[3] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ **10. LEAFLET SHAPE:**

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

11. LEAFLET SIZE:

[3] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17')
3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton')
3 = Dark Green ('Gnome'; 'Tracy')

★ **13. FLOWER COLOR:**

[2] 1 = White 2 = Purple 3 = White with purple throat

★ **14. POD COLOR:**

[2] 1 = Tan 2 = Brown 3 = Black

★ **15. PLANT PUBESCENCE COLOR:**

[1] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[3] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')

★ **17. PLANT HABIT:**

[3] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ **18. MATURITY GROUP:**

[0][5] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ **19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

BACTERIAL DISEASES:

★ [1] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [0] Bacterial Blight *(Pseudomonas glycinea)*

★ [0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [1] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [0] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Other *(Specify)*

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

★ [1] Brown Stem Rot *(Cephalosporium gregatum)*

[0] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

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19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

★ [2] Pod and Stem Blight *(Diaporthe phaseolorum var; sojae)*

[2] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma var. sojae)*

1 ← susceptible RWS 11-16-92

★ [2] Race 1 [0] Race 2 [2] Race 3 [2] Race 4 [0] Race 5 [0] Race 6 ~~1~~ [M] Race 7

[ ] Race 8 [ ] Race 9 [ ] Other *(Specify)* Race 10-1, Race 16-2, Gene from PI82263-2

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [1] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [0] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [0] Southern Root Knot Nematode *(Meloidogyne incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[0] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[ ] OTHER DISEASE NOT ON FORM *(Specify)*: _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [1] Iron Chlorosis on Calcareous Soil

[ ] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[ ] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Elgin	Seed Coat Luster	
Leaf Shape	Zane	Seed Size	Zane
Leaf Color	Zane	Seed Shape	Zane
Leaf Size	Zane	Seedling Pigmentation	Zane

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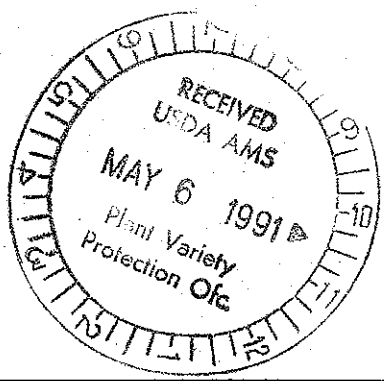
23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
Chapman Submitted	132	1.6	102	9	12	39.4	22.5	19.6	
Elgin 87 Name of Similar Variety	126	2.0	89	8	11	37.6	22.3	15.3	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.



'Chapman' Exhibit E - Statement of the Basis of Applicant's Ownership.

'Chapman' soybean is considered to be owned by the Ohio Agricultural Research and Development Center, The Ohio State University. The original cross, two backcrosses, selection of the original plant, subsequent testing of the breeding line, compositing, and seed increase of the cultivar was conducted by OSU-OARDC breeders and their supervised staff or completed by means of reciprocal or contractual arrangements with other institutions which in no way compromised ownership.

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